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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/830,028	08/15/2001	Markku Verkama	P279295	9392

909 7590 04/27/2007
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EXAMINER

IQBAL, KHAWAR

ART UNIT	PAPER NUMBER
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2617

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 09/830,028	Applicant(s) VERKAMA, MARKKU	
	Examiner Khawar Iqbal	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rabipour et al (6324515) and further in view of Tseng et al (6172974).

3. Regarding claim 1 Rabipour et al teaches a digital telecommunication system comprising (figs. 1-4, col. 9, lines 6-65):

a first center (BS A) configured to enable speech communication between a plurality of terminals (100, 140), the first center being associated with a calling terminal and including a first transcoder unit (col. 10, 3-46, col. 11, lines 11-37);

a second center (BS B) that is configured to enable speech communication between a plurality of terminals, the second centre being associated with a called terminal and including a second transcoder unit (col. 10, 3-46, col. 11, lines 11-37),

wherein the first and second transcoder units each include speech codecs (col. 10, 3-46, col. 11, lines 11-37), and each of the terminals comprises one or more speech codecs (each wireless terminal with a plurality of encoders and decoders selectively used in dependence of the encoders and decoders provided at the remote wireless terminal) (col. 2, lines 16-20, col. 10, 3-46, col. 11, lines 11-37), the terminals being arranged to provide information regarding the supported one or more speech codecs to

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their associated switching centers (BS A, a switch functional block 232, selects the actual decoder unit to be activated to perform the decoding operation of the particular format of compressed audio data frames received at the input 249 and BS B...) (col. 10, 3-46, col. 11, lines 11-37);

the first centre is configured to perform handshaking with the second center, the handshaking including indication of the speech codecs supported by the calling terminal (col. 10, 3-46, col. 11, lines 11-37) wherein at least one of the first and second centres is configured to choose the speech codec used commonly by the calling and called terminals (A switch activates a selected one of the decoding units in dependence of the format of the compressed audio signal data frames received from a remote communication terminal. This system allows the communication terminal to support a number of different speech compression) (col. 10, 3-46, col. 11, lines 11-37), and wherein at least one of the first and second centres is configured to establish call connections that bypass one or more of the transcoder units or to control the transcoder units to transmit encoded speech between the called and calling terminals without performing speech encoding operations so that speech is encoded and decoded only in the terminals (col. 10, 3-46, col. 11, lines 11-37). Rabipour et al does not specifically state codecs including an encoder unit and decoder unit in the centres.

In an analogous art, Tseng et al teaches codecs including an encoder unit and decoder unit (col. 7, lines 1-46, col. 9, lines 40-60). Tseng et al also teach regarding claims 2-3,8-9 mobile switching center (12A, 12b, MSC/BSC, see fig. 2). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was

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made to modify the device of Rabipour et al by specifically adding features codecs including an encoder unit and decoder unit in the mobile switching center in order to enhance system performance improves voice quality by using an encoding algorithm better matching the decoding algorithm and improving the speech quality in wireless communication as taught by Tseng et al.

Regarding claim 4 Rabipour et al teaches wherein the handshaking is performed as outband signaling (col. 10, 3-46, col. 11, lines 11-37).

Regarding claim 5 Rabipour et al teaches wherein the first and second centres are configured to perform the handshaking in association with a routing information inquiry issued in response to a determination that the called terminal is a mobile subscriber (col. 10, 3-46, col. 11, lines 11-37).

Regarding claims 6,7 Rabipour et al teaches the first center is configured to send the routing information inquiry including information associated with the speed coded sported by the calling terminal (col. 10, 3-46, col. 11, lines 11-37).

Regarding claims 10,11 Rabipour et al teaches wherein, when required, at least one of the first and second centre is configured to notify the associated of the speech codec it has to use as the result of the handshaking (col. 10, 3-46, col. 11, lines 11-37).

Regarding claim 12 Rabipour et al teaches wherein a pulse code modulated digital link exists between the first and second centres, and the first and second centres are configured to control their respective transcoder units to adapt an encoded speech signal to one or more least significant bits of PCM samples without transcoding (col. 10, 3-46, col. 11, lines 11-37).

Regarding claim 13 Rabipour et al teaches the system configured to support packet link (col. 3, lines 30-40, and col. 4, lines 5054).

Regarding claim 14 Rabipour et al teaches a centre in a digital telecommunication network configured to receive information regarding supported one or more speech codecs of a calling terminal (each wireless terminal with a plurality of encoders and decoders selectively used in dependence of the encoders and decoders provided at the remote wireless terminal) (col. 2, lines 16-20, col. 10, 3-46, col. 11, lines 11-37) and connect a transcoder located in a transcoder unit to a call connection when required, wherein (figs. 1-4, col. 9, lines 6-65):

the centre is configured to perform handshaking with another centre associated with a called terminal (col.10, 3-46, col. 11, lines 11-37), the handshaking including indication of speech codecs supported by the calling terminal associated with the centre (col. 10, 3-46, col. 11, lines 11-37), the centre also being configured to choose the speech codec commonly used by the terminals (col. 10, 3-46, col. 11, lines 11-37), and the centre is configured to connect a call connection that bypasses the transcoder unit or to control the transcoder unit to transmit the encoded speech without performing speech encoding operations in such a way that speech encoding and decoding are only performed in the calling or called terminal (col. 10, 3-46, col. 11, lines 11-37). Rabipour et al does not specifically teach codecs including an encoder unit and decoder unit in the centre.

In an analogous art, Tseng et al teaches codecs including an encoder unit and decoder unit (col. 4, lines 35-55, col. 7, lines 1-46, col. 9, lines 40-60). Tseng et al also

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teach regarding claims 15-17 signaling is ISUP setup is an IAM and ANM message (see fig. 2). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Rabipour et al by specifically adding features mobile switching center signaling is ISUP setup is an IAM and ANM message in order to enhance system performance Improves voice quality by using an encoding algorithm better matching the decoding algorithm and improving the speech quality in wireless communication as taught by Tseng et al.

Response to Arguments

4. Applicant's arguments filed 02-28-07 have been fully considered but they are not persuasive. The examiner has thoroughly reviewed applicant's arguments but firmly believes that the cited references reasonably and properly meet the claimed limitations. In regard to applicant's arguments against Rabipour et al and Tseng et al, Rabipour et al teaches, each wireless terminal with a plurality of encoders and decoders selectively used in dependence of the encoders and decoders provided at the remote wireless terminal. A signal and control functional block (230) is provided to issue a command signal to a switch (232) to adopt a particular decoder unit selection position. The switch selects an actual decoder unit to be activated to perform a decoding operation. The signal and control functional block determines the position of the switch based on the format of the compressed audio data frames received at an input (249) (col. 2, lines 16-20, col. 10, 3-46, col. 11, lines 11-37). Tseng et al teaches the originating and terminating units contain A/D-D/A converters and apparatus for achieving tandem free operation (TFO) in which the vocoders in MSC/BSC are bypassed. Signaling device of

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terminating unit responds to call initiation signal of originating unit through BSC/MSC and sends a low frequency signal through channel to the base station of originating unit. The frequency of signal indicates the type and capabilities of terminating unit vocoder, which is less than the roll-off frequency of A/D-D/A converters. An analyzer of originating unit base station analyses the received low frequency signal and determines the compatible condition of digital signals between vocoders. The control units provided in base stations directs voice signals between units and bypasses both BSC/MSC vocoders, when the digital signals of terminating unit vocoder is compatible with originating unit vocoder and directs digital voice signal in tandem mode when the digital signal of terminating unit vocoder is not compatible with originating unit. The compatible condition of digital signals of terminating unit vocoder with originating unit vocoder is determined, by analysis of low frequency signal (col. 4, lines 35-55, col. 7, lines 1-46, col. 9, lines 40-60).

Therefore, the rejections of the claims will remain.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

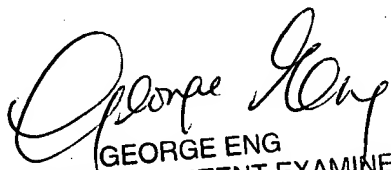
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khawar Iqbal whose telephone number is 571-272-7909.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, GEORGE ENG can be reached on (571) 272-7495. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

Khawar Iqbal


GEORGE ENG
SUPERVISORY PATENT EXAMINER